

# Trends In Amplification

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## From the Editors

In the last fifteen years, hearing aid signal processing modes have evolved from simple analog to analog digitally programmable to fully digital. Nearly all of the commercial hearing aids available before 1989 used analog signal-channel linear signal processing for low to mid-level sounds and some were implemented with compression limiting to reduce loud sounds. Advances in chip design, digital signal processing, and battery technologies lead to the first generation of fully digitally hearing aids in 1995. Fully digital hearing aids have advanced greatly in this time and many previously unachievable features are now available, e.g., adaptive directional microphones and adaptive feedback suppression algorithms. From the signal processing point of view, the hearing aid industry as a whole has made a great leap in a relatively short period of time.

If the degree of sophistication of the signal processing technologies were the only determinant of hearing aid satisfaction, most of the audiologists and hearing aid users should be smiling by now. Unfortunately, our experience tells us that each individual's journey to hearing aid use is unique and personal and his/her experiences of hearing aid use do not necessarily correlate with how advanced the hearing aids he/she is wearing. Past experiences (e.g., previous hearing aid experiences, information from friends and counseling received) may shape the person's expectation. Other factors such as unaided hearing ability, communication demands and life style may also affect the user's perceived benefits of the hearing aids. These factors and many others may play a role and interact with each other to influence the degree of hearing aid satisfaction. With all the factors contributing to hearing aid satisfaction it is no wonder that direct measure of hearing aid satisfaction is advocated.

In this issue of the *Trends in Amplification*, the authors have reviewed current hearing aid satisfaction measurement tools and systematically discussed the factors associated with hearing aid satisfaction. They also raise interesting questions of the effectiveness of the

current measurement tools and the timing of administering the hearing aid satisfaction measurements. Further, the possible future directions in developing hearing aid satisfaction measurement tools with higher accuracy and validity were discussed. This information may help us to better understand our clients and their amplification needs, and to shed some light in how to improve hearing aid satisfaction in our clinical practice, in general.

Ms. Lena Wong is currently an Assistant Professor at University of Hong Kong. She received her Bachelor of Art and Master of Art degree from California State University, Fresno, CA. She worked as a clinical and research audiologist for four years at House Ear Institute before joining University of Hong Kong in 1994. Since then she has been an integral part of Audiology education in Hong Kong, Taiwan and China. Ms. Wong has established the first Audiology training program that grants Master of Art degrees in University of Hong Kong. She is also an Adjunct Assistant Professor at Taipei National College of Nursing, Taiwan and a Guest Professor at Nanjing Normal School for Special Education, China. Ms. Wong has published peer-reviewed papers on a wide variety of topics, e.g., comparisons of hearing aid technology, speech and tone perception of children with cochlear implants and hearing impairment, tympanometric measurement of Chinese adults and hearing aid satisfaction. She has also developed the Chinese counterpart of the Hearing In Noise Test (HINT). In addition, Ms. Wong has presented in many international conferences and served as committee members in various professional organizations. She is the president of Hong Kong Society of Audiology.

The two co-authors, Drs. Louise Hickson of University of Queensland, Australia, and Bradley McPherson of University of Hong Kong, are Ms. Wong's mentors in her doctoral study program.

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